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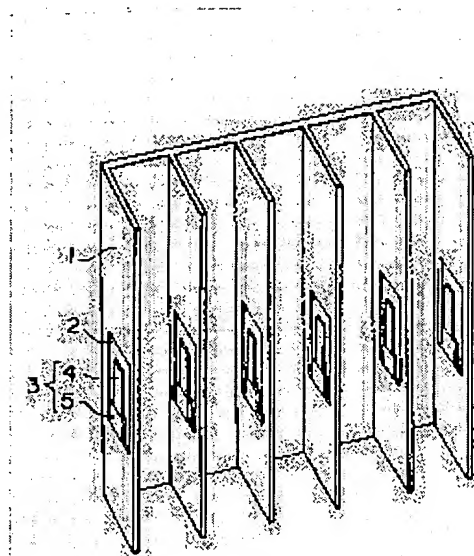
(54) HEAT DISSIPATION FIN WITH PIEZOELECTRIC FAN

(57)Abstract:

PURPOSE: To enhance a forced heat dissipation effect as well as to enable an automatic control of the intensity of a blast by utilizing the temperature characteristics of piezoelectric elements by a method wherein a heat dissipation plate of a heat dissipation fin is provided with a piezoelectric fan and which supplied the blast.

CONSTITUTION: Each piezoelectric fan 3 is installed in an apertures 2 formed in each of plural heat dissipation plates 1 facing upward. The piezoelectric fan 3 consists of an elastic plate 4 and a piezoelectric element 5 and one end of the element 5 is fixed on the head dissipation plate 1 directly or interposing an excellent heat transfer elastic material between them. Accordingly, by impressing an AC voltage having a proper frequency on

the piezoelectric elements 5, the piezoelectric fans 3 are driven, a blast is supplied to the heat-dissipation plates 1 from their low directions and a heat dissipation effect can be augmented. The heat dissipation plates 1 are provided with the piezoelectric elements 5, the temperature coefficient of the piezoelectric constant d_{31} of which is positive and which are 1,000ppm/°C or more, using various transverse effect type elements of a unimorph, a bimorph, a laminated unimorph and a laminated bimorph, whereby the blast intensity of the piezoelectric fans 3 can be automatically controlled according to the temperature of the heat dissipation plates 1 without using a special temperature detecting means.



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